

Muskoka's economy and its community are strongly dependent on the quality of our natural environment. Our people, both permanent residents and seasonal, greatly value our shared environment and recognize its intangible contributions to our quality of life.

Muskoka Watershed Council's technical report, **Planning for Climate Change in Muskoka**, provides a detailed explanation of what is happening to climate in Muskoka, and the consequences of these changes for our waterways and forests, and for our infrastructure and our lives. This report offers several recommendations for action by provincial and municipal governments, by businesses, community groups, and individuals.

If we plan for and implement policies to accommodate the changing climate, Muskoka will be a better place. Muskokans have some important decisions to make, and some actions to take. Our children and our grandchildren will thank us for the efforts we make now.

Please read or download our report **Planning Climate Change in Muskoka** at www.muskokawatershed.org or call 705-646-0111 for more information.

The New Muskoka Climate



Muskoka
WATERSHED COUNCIL

Planning for Climate
Change in Muskoka

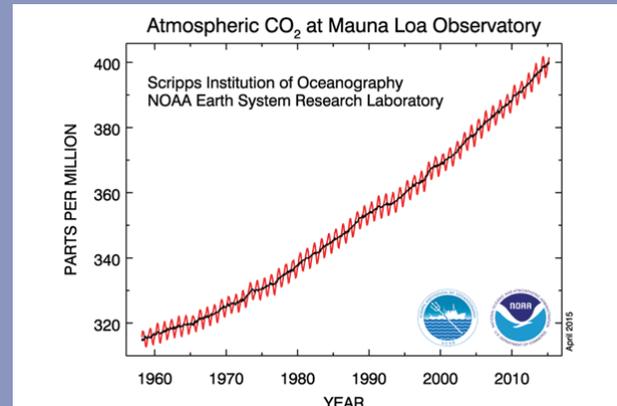
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Climate is changing in Muskoka! Changes in climate will have real consequences for our natural environment and for our own lives. What will our climate be like in 2050 and how can we adapt? Let's plan ahead and be proactive.

The Issue

Carbon dioxide (CO₂) is one of several greenhouse gasses (methane, water vapour and nitrous oxide are others) in our atmosphere. They act as insulation, keeping heat from escaping to space. Burning coal, oil and gas to fuel our economy has added CO₂ to the atmosphere, increasing the insulation, and our planet is warming as a result.



(Source: U.S. National Oceanic and Atmospheric Administration's Earth Systems Research Laboratory, Global Monitoring Division website: <http://www.esrl.noaa.gov/gmd/ccgg/trends/>).

The CO₂ we have already added will continue to warm the planet through this century. At present, the global economy adds about 36 gigatonnes of CO₂ per year to the atmosphere – that's a lot of extra insulation!

Complex global climate models now enable climate scientists to project the likely climate in coming decades (with assumptions made on economic growth and how much of the energy used will be derived from coal, oil and gas). Using the output of 19 different global climate models, MWC has been able to specify the most likely climate in Muskoka at mid-century (2041 to 2070).

Muskoka's New Climate

MWC's data suggests that Muskoka's climate at mid-century is going to be warmer and slightly wetter than at present, and that precipitation may come in fewer but more pronounced storm events.

The expected warming is approximately 3-4 °C in average daily temperatures each month. That's substantial!

Generally, the climate we expect to see in Muskoka by mid-century will:

- be noticeably wetter in late fall to early spring (we're expecting a 17% increase in the amount of precipitation during this period);
- likely be no wetter than at present in summer and fall;
- be warmer over the late spring to early fall and there will be more evaporation (and transpiration by plants); and
- seem dryer in the summer and soils will be dryer than they are now. Less water will be available to nourish wetlands, provide stream flow, and keep our lake levels high.

And what about our winters? The typical year at mid-century will have about half of the number of really cold winter nights (-20 °C) and about four times the number of winter nights that remain above freezing. There will be 64% more winter days a year in which the maximum temperature is above freezing, and seven times more summer days in which the maximum temperature exceeds 30°C.